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March 15, 2019

Ms. Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804

Subject: Contract No. EP-W-07-066, Task Order No 066-016-09Q1, Williams Air Force Base Task Order, Review of the Draft Soil Vapor Extraction System Operation and Maintenance, 2017 First and Second Quarter Performance Report, Former Liquid Fuels Storage Area, Site ST012, Former Williams Air Force Base, Mesa, Arizona, February 2019

Dear Ms. d'Almeida:

Attached please find TechLaw's cursory review of the Draft Soil Vapor Extraction System Operation and Maintenance, 2017 First and Second Quarter Performance Report, Former Liquid Fuels Storage Area, Site ST012, Former Williams Air Force Base, Mesa, Arizona, dated February 15, 2019 (1Q/2Q 2017 SVE O&M Report).

While most of the information, which is presented in the 1Q/2Q 2017 SVE O&M Report, has been provided during weekly reports and/or the monthly partnering team conference calls, it is unclear why the 1Q/2Q 2017 SVE O&M Report is being provided in February 2019, nearly two years after the period covered by the report. It is also unclear if other quarterly and/or semiannual reports will be issued more promptly.

These comments were forwarded to you through electronic mail in Word format. TechLaw understands you will review and modify the comments at your discretion.

We appreciate the opportunity to provide technical support services to U.S. EPA on this Task Order. Should you have any questions or comments, please contact me or the TechLaw Project Manager, Nicole Goers, at (540) 836-0420.

Sincerely,

A handwritten signature in cursive script that reads 'Indira Balkissoon'.

Indira Balkissoon
ROC 9 Senior Task Order Manager

KB:NG:IB:as

cc: Central files, TechLaw, Inc.

**FORMER WILLIAMS AIR FORCE BASE
Mesa, Arizona**

**Review of the Draft Soil Vapor Extraction System Operation and Maintenance, 2017 First
and Second Quarter Performance Report, Former Liquid Fuels Storage Area, Site ST012,
Former Williams Air Force Base, Mesa, Arizona**

Submitted to:

**Ms. Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
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Submitted by:

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**Task Order No.
Contract No.
EPA TOCOR
Telephone No.
TechLaw TO Manager
Telephone No.**

**066-016-09Q1
EP-W-07-066
Carolyn d'Almeida
(415) 972-3150
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(540) 836-0420**

March 15, 2019

Review of the Draft Soil Vapor Extraction System Operation and Maintenance, 2017 First and Second Quarter Performance Report, Former Liquid Fuels Storage Area, Site ST012, Former Williams Air Force Base, Mesa, Arizona, February 2019

GENERAL COMMENT

1. The Draft Soil Vapor Extraction System Operation and Maintenance, 2017 First and Second Quarter Performance Report, Former Liquid Fuels Storage Area, Site ST012, Former Williams Air Force Base, Mesa, Arizona, February 2019 (1Q/2Q 2017 SVE O&M Report) does not use the same identifiers for the soil vapor extraction (SVE) wells consistently. For example, well ST012-SVE12 is identified as well SVE-12. Similarly, in Appendix E (SVE Historical Hydrocarbon Concentration Data), some wells are identified using the format SVE08 Middle, while others are identified using the format SVE-12. It is understood that the second word in the descriptor “SVE08 Middle” is the depth of the well, but the format of the well identifier should be consistent. Please revise the 1Q/2Q 2017 SVE O&M Report to address this issue.
2. Section 3.3.2.1 (Wastewater Discharge Permit) states that the semi-annual discharge report for December 2016 through May 2017 is included in Appendix L (Semi-Annual Discharge Report) for wastewater discharged to the City of Mesa, but this appendix does not include the criteria that must be met to satisfy Discharge Permit No. M-5863-0122. For example, it is unclear if the petroleum hydrocarbons (C10-C28) – diesel range (TPH-D) that passed through the liquid phase granular activated carbon (LGAC) met discharge criteria. In addition, based on the midfluent and effluent results it does not appear that the LGAC was effective in treating TPH-D. Finally, the information provided in Appendix L does not specify if the discharged wastewater was below the 150 degree Fahrenheit maximum temperature allowed for discharge to the City of Mesa sewer, as specified in Section 3.1.3 (Site Temperature Monitoring). Please revise the 1Q/2Q 2017 SVE O&M Report to include the criteria that must be met to satisfy Discharge Permit No. M-5863-0122, discuss why the LGAC was ineffective in treating TPH-D, and specify whether discharged water was below the maximum temperature allowed for discharge to the City of Mesa sewer.

SPECIFIC COMMENTS

1. **Section 1.2, Conceptual Site Model, Page 1-2, Lines 179-180:** The description of the conceptual site model (CSM) is obsolete. Specifically, the text states that the Upper Water Bearing Zone (UWBZ) “is the uppermost saturated unconfined layer at the site,” but the water table is currently located within the cobble zone (CZ). Please revise the CSM described in the 1Q/2Q 2017 SVE O&M Report to acknowledge that the water table is now in the CZ.
2. **Section 2.1.3, SVE Equipment Maintenance Activities, Page 2-8, Lines 455-456:** Strong winds were reported to have triggered repeated failure alarms because the winds extinguished the pilot flame, but a solution for this issue was not discussed. For example,

it may be possible to shield the pilot flame from high winds by placing it in a shielded enclosure. Please revise the 1Q/2Q 2017 SVE O&M Report to discuss actions that can be taken to minimize the impact of high winds on the operation of the thermal oxidizer system.

3. **Graph 2-1, Historical Mass Removal (TPH as JP-4), Page 2-24:** One notation on this graph provides the reason for the 39.7 percent SVE operational time between January and March 2010, but similar information is not provided for the 39.0 percent SVE operational time between July and September 2014 (3Q 2014). Please explain the low percent SVE operational time during 3Q 2014.
4. **Section 2.3.2, Notable Trends, Pages 2-26 through 2-28 and Appendix E, SVE Historical Hydrocarbon Concentration Data:** It is unclear why the notable trends discussion does not explain why some wells have no discernable trend. The lack of a discernable trend is most noticeable for well SVE-12 (Figure E-31), but well SVE08 Shallow (Figure E-23) also has no discernable trend. The text should acknowledge the lack of discernable trends and explain why these wells are different than the others. Please revise Section 2.3.2 to discuss wells that do not have discernable trends, including why this is the case and how these wells may differ from others that do have visible trends.